

AMENDMENTS TO THE CLAIMS:

The listing of claims below will replace all prior versions and listings of claims in this application. Deleted matter is shown by strikethrough or double brackets and added matter is shown by underlining.

Listing Of Claims:

- 1 1. (currently amended) A writing instrument comprising:
2 a barrel having a proximal end with a proximal opening and distal end with a
3 writing end opening opposite said proximal end;
4 a writing medium cartridge positioned in said barrel and having a writing tip
5 extending out said writing end opening and a proximal end;
6 an end plug in said proximal opening; and
7 a cushioning element formed integrally and as a single piece with said end
8 plug;
9 wherein said cushioning element abuts said proximal end of said writing
10 medium cartridge.
- 1 2. (original) The writing instrument of claim 1, wherein said end plug is
2 attached to said barrel.
- 1 3. (original) The writing instrument of claim 2, wherein said end plug is
2 attached to said proximal opening of said barrel by an adjustable threaded attachment.
- 1 4. (original) The writing instrument of claim 2, wherein said end plug is
2 permanently attached to said proximal opening of said barrel.
- 1 5. (original) The writing instrument of claim 3, wherein said end plug is
2 ultrasonically welded to said proximal opening.
- 1 6. (original) The writing instrument of claim 1, wherein said cushioning
2 element is spring-shaped.
- 1 7. (original) The writing instrument of claim 1, wherein said cushioning
2 element holds said cartridge.

1 8. (original) The writing instrument of claim 1, wherein said cushioning
2 element further comprises a hole to allow venting.

1 9. (currently amended) An end plug adapted for use in positioning in an open
2 proximal end of a writing instrument opposite a writing end of the writing instrument, said
3 end plug comprising:

4 an a closed end cap; and

5 a cushioning element formed integrally as a single piece with said end cap.

1 10. (original) The end plug of claim 9, wherein said end plug is made of a
2 thermoplastic polymer.

1 11. (original) The end plug of claim 9, wherein said cushioning element is a
2 spring.

1 12. (original) The end plug of claim 11, wherein said spring is configured to be
2 injection moldable.

1 13. (original) The end plug of claim 11, wherein said spring is configured such
2 that the spring has a spring force of about 0.45 kg/mm of axial deflection.

1 14. (currently amended) A method of manufacturing an end plug with an
2 integral cushioning element, said method comprising:

3 bringing together two mold halves, each mold half comprising mold cavities
4 for forming ~~the~~ an end plug with shaped for coupling to and closing an open end of a
5 writing instrument barrel and having an integral cushioning element, to mate the cavities
6 with each other;

7 inserting a pin into the mold halves;

8 injecting flowable material into the mated mold halves; and

9 removing the formed end plug with integral cushioning element from the
10 mold.

1 15. (original) The method of claim 14, further comprising forming the integral
2 cushioning element in the form of a spring.

1 16. (original) The method of claim 14, wherein injecting flowable material into
2 the mated mold halves further comprises injecting a molten material.

1 17. (original) A writing instrument comprising:
2 a plurality of components; and
3 a cushioning element formed integrally with one of said components during
4 formation of at least one of said cushioning elements and said one of said components;
5 wherein a writing element is held by said cushioning element.

1 18. (original) The writing instrument of claim 17, further comprising:
2 a barrel having a distal end, a proximal end, and a writing end opening in
3 said distal end;
4 wherein said cushioning element is formed integrally with said barrel.

1 19. (original) The writing instrument of claim 17, further comprising:
2 a barrel having a distal end and a proximal end; and
3 a front nose cone at said distal end of said barrel and having a writing end
4 opening;
5 wherein said cushioning element is formed integrally with said front nose
6 cone.

1 20. (original) A writing instrument comprising:
2 a barrel having a proximal end with a proximal opening and a distal end with
3 a writing end opening;
4 a cartridge in said barrel having a writing tip extending out said writing end
5 opening;
6 an end plug in said proximal opening; and
7 a cushioning element formed integrally with said end plug;
8 wherein said cartridge is held by said cushioning element.

1 21. (original) The writing instrument of claim 20, wherein said cushioning
2 element is composed of a different material than the material of said end plug.

1 22. (currently amended) A method of manufacturing a writing instrument, said
2 method comprising:
3 forming an end plug with an integrally formed cushioning element in a mold
4 such that the end plug cushioning element are coupled together by said forming; and
5 coupling the end plug to a writing instrument barrel such that an end of a
6 cartridge in said writing instrument barrel abuts said cushioning element.

1 23. (original) The method of claim 22, further comprising the steps of:
2 forming the cushioning element;
3 positioning the cushioning element between two mold halves, each mold half
4 comprising mold cavities for forming an end plug;
5 bringing together the mold halves to mate the cavities with each other, so
6 that at least part of the cushioning element is positioned in said cavities;
7 injecting flowable material into said mated mold halves to form the end plug;
8 and
9 removing the formed end plug with integral cushioning element from the
10 mold.

1 24. (original) The method of claim 22, further comprising permanently attaching
2 the formed end plug with integral cushioning element to a writing instrument barrel.

1 25. (original) The method of claim 22, further comprising forming the end plug
2 and the cushioning element from different materials.

1 26. (currently amended) A writing instrument comprising:
2 a barrel having a proximal end and a distal end with a writing end opening;
3 a cartridge positioned in said barrel and having a writing tip extending out
4 said writing end opening and a proximal end;
5 a cushioning element in the form of a coil spring abutting said cartridge and
6 permitting axial movement of said cartridge within said barrel upon compression of said
7 cushioning element by said cartridge during writing; and
8 a stop element extending through said cushioning element and affecting
9 compression of said cushioning element once said cushioning element is compressed a
10 predetermined extent of said cartridge, wherein said proximal end of said cartridge abuts
11 said stop element.

1 27. (original) The writing instrument of claim 26, wherein:
2 a proximal opening is defined in said proximal end of said barrel;
3 said writing instrument further comprises an end button positioned in said
4 proximal opening in said barrel; and
5 said cushioning element is positioned between said end button and said
6 proximal end of said cartridge.

1 28. (original) The writing instrument of claim 27,
2 wherein:
3 a longitudinal channel is defined in said end button and has a closed
4 proximal end;
5 said stop element extends through said longitudinal channel in said end
6 button; and
7 a gap is left between said stop element and said closed proximal end of said
8 longitudinal channel in said end button when said cushioning element is in a neutral
9 position. a gap is left between said stop element and said closed proximal end of said
10 longitudinal channel in said end button when said cushioning element is in a neutral
11 position.

1 29. (original) The writing instrument of claim 26,
2 wherein said stop element is formed from a material that inhibits, but does
3 not prevent, further compression of said cushioning element once said cushioning element is
4 compressed to said predetermined extent.

1 30. (original) The writing instrument of claim 26, wherein said stop element is
2 formed from a material that prevents further compression of said cushioning element once
3 said cushioning element is compressed to said predetermined extent.

1 31. (original) A writing instrument comprising:
2 a barrel having a proximal end and a distal end with a writing end opening;
3 a cartridge positioned in said barrel and having a writing tip extending out
4 said writing end opening and a proximal end; and
5 a cushioning element having a variable spring rate and permitting axial
6 movement of said cartridge within said barrel upon compression of said cushioning element
7 by said cartridge during writing.

1 32. (original) The writing instrument of claim 31, wherein:
2 a proximal opening is defined in said proximal end of said barrel;
3 said writing instrument further comprises an end button positioned in said
4 proximal opening in said barrel; and
5 said cushioning element is positioned between said end button and said
6 proximal end of said cartridge.

1 33. (original) The writing instrument of claim 31, wherein said cushioning
2 element is in the form of a coil spring with coils set at varying distances to result in the
3 variable spring rate.

1 34. (new) The writing instrument of claim 26, wherein said stop element is
2 slidably positioned within said cushioning element.

1 35. (new) A writing instrument comprising:
2 a barrel having a proximal end and a distal end with a writing end opening;
3 a cartridge positioned in said barrel and having a writing tip extending out
4 said writing end opening and a proximal end;
5 a cushioning element in the form of a coil spring abutting said cartridge and
6 permitting axial movement of said cartridge within said barrel upon compression of said
7 cushioning element by said cartridge during writing; and
8 a stop element extending through said cushioning element and affecting
9 compression of said cushioning element once said cushioning element is compressed a
10 predetermined extent of said cartridge;
11 wherein:
12 a proximal opening is defined in said proximal end of said barrel;
13 said writing instrument further comprises an end button positioned in said
14 proximal opening in said barrel;
15 a longitudinal channel is defined in said end button and has a closed
16 proximal end;
17 said stop element extends through said longitudinal channel in said end
18 button;
19 said cushioning element is positioned between said end button and said
20 proximal end of said cartridge; and
21 a gap is left between said stop element and said closed proximal end of said
22 longitudinal channel.

1 36. (new) A writing instrument comprising:
2 a barrel having a proximal end and a distal end with a writing end opening;
3 a cartridge positioned in said barrel and having a writing tip extending out
4 said writing end opening and a proximal end;
5 a cushioning element in the form of a coil spring abutting said cartridge and
6 permitting axial movement of said cartridge within said barrel upon compression of said
7 cushioning element by said cartridge during writing; and

8 a stop element extending through said cushioning element and affecting
9 compression of said cushioning element once said cushioning element is compressed a
10 predetermined extent of said cartridge;
11 wherein said stop element is formed from a material that inhibits, but does
12 not prevent, further compression of said cushioning element once said cushioning element is
13 compressed to said predetermined extent.